

In the Matter of )  
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**PUBLIC SAFTY AND HOMELAND** )  
**SECURITY BUREAU INVESTIGATION** ) PS Docket No. 17-68  
**INTO AT&T MOBILITY OUTAGES** )  
**ON MARCH 8, AND MARCH 11, 2017** )  
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Comtech Telecommunications Corp. (“Comtech”)<sup>1</sup> hereby submits its comments to the Federal Communications Commission (“FCC”) in response to the March 23, 2017 *Public Notice* (“Notice”) in the above referenced docket.<sup>2</sup>

Comtech's experience in Public Safety communications began two decades ago when we pioneered the first U.S. wireless E9-1-1 solution in 1997. Today Comtech provides a comprehensive suite of Public Safety systems and services to commercial carriers, and to state and local jurisdictions. As the ecosystem of "9-1-1" continues to evolve towards the promises of Next Generation 9-1-1, and with it the aspirations of a truly interconnected, highly reliable, and highly redundant multimedia 9-1-1 experience for end users and stakeholders, Comtech remains at the forefront of efforts to realize this potential. We greatly value the relationships we have with

<sup>2</sup> *Public Safety and Homeland Security Bureau Announces Investigation Into AT&T Mobility Outages on March 8, and March 11, 2017*, (PS Docket No. 17-68) (DA 17-277) Released: March 23, 2017 (Notice) [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2017/db0323/DA-17-277A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0323/DA-17-277A1.pdf)

the Public Safety community and the FCC, and welcome any opportunity to embody what we believe are the best practices for our industry.

Moreover, as the 9-1-1 ecosystem has evolved and become more interdependent among the various network providers, regulatory entities, and state and local jurisdictions, the FCC has encouraged the industry to accept greater accountability regarding high network reliability benchmarks. In addition to increased reliability, the FCC has focused on Public Safety Answering Point (PSAP) notification during 9-1-1 outages and impairments. Comtech, primarily through our 24/7 Network Operations Center, routinely interacts with PSAPs during and after 9-1-1 outages, and works with our partners and customers to troubleshoot and resolve concerns promptly. We take pride in our service to the Public Safety community and consider the PSAP community to be an important “customer”.

AT&T Mobility<sup>3</sup> has been a Comtech customer since 1997. In the time since, Comtech has completed thousands of PSAP deployments for evolving 9-1-1 dialing platforms (including 2G, 3G, VoLTE, and VoIP) across the AT&T network, and has provided 9-1-1 call routing and data delivery for millions of 9-1-1 calls originating from the AT&T network. We appreciate the opportunity to provide comments on the events surrounding the March 8, 2017 AT&T Mobility outage for 9-1-1 services.<sup>4</sup>

## **II. Comments**

### **a. Services Impacted During the March 8<sup>th</sup> AT&T 9-1-1 Outage**

Comtech is one of two providers nationally that provide PSAP routing and location information delivery for AT&T Voice over LTE (VoLTE) 9-1-1 calls. Although Comtech delivers a wide

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<sup>3</sup> This includes a succession of predecessor entities that ultimately became AT&T Mobility.

<sup>4</sup> Comtech does not have meaningful information regarding the subsequent VoLTE outage of March 11, 2017 addressed in the Notice because it was not 9-1-1 specific.

range of 9-1-1 platform and system services to AT&T, Comtech believes that the outage of March 8<sup>th</sup> impacted only AT&T's VoLTE 9-1-1 services.

**b. The Preliminary Indications of Root Cause**

Although a root cause has not yet been provided to Comtech by AT&T, FCC depictions of the event indicate that, “a hardware issue prevented their customers from connecting during a brief period on March 11”.<sup>5</sup> Every indication thus far is that this was a hardware issue within the AT&T operated network (i.e., only within the AT&T network demarcation).

**c. NORS Report Filing and PSAP Notification by Comtech**

Comtech has a demonstrated history of working cooperatively with the FCC and PSAPs on 9-1-1 impairment detection, reporting, resolution, and after-action lessons learned. Although the March 8<sup>th</sup> AT&T 9-1-1 Outage occurred outside of the Comtech network demarcation, and thus was not a Comtech reportable event under FCC Rules, we voluntarily; a) filed a NORS<sup>6</sup> outage report, and b) notified PSAPs nationwide of an 9-1-1 outage potentially impacting their jurisdictions.

Regarding the NORS filing, Comtech made a “Notification” filing (the “Notification” filing is the first of three required filings for a qualifying event) via NORS within one hour of learning of the outage from AT&T on March 8<sup>th</sup>. We subsequently provided the second required filing (the “Initial” filing) within the required seventy-two hour deadline, updating our Notification with new information. Lastly, Comtech filed the “Final” (the third of three required filings) on April 6th.

Regarding the notification to potentially impacted PSAPs, Comtech sent both an “Initial” and a “Resolved” notification via email to over 5,300 PSAPs nationwide for the March 8<sup>th</sup> event.

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<sup>5</sup> Notice at p.1.

<sup>6</sup> NORS – Network Outage Reporting System, <https://www.fcc.gov/network-outage-reporting-system-nors>

Comtech has developed a notification system for this purpose, and we periodically contact PSAPs nationally with requests for updated contact information. In fact, we completed a nationwide update effort approximately two months prior to the outage event.

On the topic of effective PSAP notification, a significant challenge faced by Comtech under the FCC Part 4 requirements is the ongoing maintenance of a 9-1-1 outage notification contact database for all PSAPs nationally. Today, those entities that are required to notify PSAPs of 9-1-1 outages under the FCC Part 4 rules are, to the best of our knowledge, separately assembling and continually maintaining their own unique national 9-1-1 outage contact lists for PSAPs. The primary way to do this is for each entity to contact separately every 9-1-1 PSAP (assuming initial generic contact information is available and correct). This is an arduous undertaking, fraught with potential errors, both for the requesting entities and for the PSAPs. The process for notifying PSAPs must be as fast and effective as reasonably possible. Managing real-time information and resolution activity during a 9-1-1 outage event is already challenging and complex.

Therefore, Comtech urges the FCC to consider ways in which a single national “golden list” of PSAP contacts for 9-1-1 outage notification can be securely made available on demand to all entities obligated under the Part 4 PSAP notification requirements. This single database would significantly streamline the process of notifying PSAPs and would also eliminate the burden on PSAPs of responding to multiple requests from different entities for 9-1-1 notification contact updates. Only one database would need to be managed. The FCC uses a similar concept to manage a national list of Text-to-9-1-1 ready PSAPs.

Lastly, in our experience, two additional features are important when considering this single database model. First, email is the preferred and primary method of notification to PSAPs.

Of the notification methods in the FCC Part 4 regulations, email offers the best combination of speed (i.e., one-to-many, simultaneously), content (i.e., pertinent details can easily be conveyed), and traceability (i.e., both sender and recipient have a record of the communication's transmission and receipt). Second, if individual PSAPs or jurisdictional groupings of PSAPs, even at the state level, can establish self-managed "9-1-1 outage email notification" distribution lists within their jurisdictions (e.g. 911outage@PSAP123.com), then the likelihood of efficient, timely, and effective delivery of 9-1-1 outage notifications to such PSAPs is significantly increased, and the need for constant updates to the single database due to personnel or process changes at the PSAP is significantly reduced. Comtech suggest that the FCC and other interested 9-1-1 entities and/or trade associations join in pursuing a solution to the notification database management problem.

### **III. Conclusion**

Comtech is proud of our pioneering and continuing accomplishments in 9-1-1 Public Safety, and acknowledges the collaborative support from many entities in this important ecosystem. The March 8<sup>th</sup> AT&T 9-1-1 outage highlights the complexity inherent in this evolving environment, and the need for continued cooperation in the provision of 9-1-1.

Respectfully submitted,

/s/ Kim Robert Scovill

Kim Robert Scovill, Esq.  
Comtech Telecommunications Corp.  
275 West Street - Suite 400  
Annapolis, MD 21401  
[kim.scovill@comtechtel.com](mailto:kim.scovill@comtechtel.com)  
[www.comtechtel.com](http://www.comtechtel.com)

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